ORDER NO. RD83105393A2

Service Manual

Radio

RF-B50L

(for F.R. Germany)

FM-MW-LW-SW1~7
10-Band Portable Radio

- Please use this manual together with the service manual for model No. RF-B50L order No. RD83095388C2.
- This Service Manual indicates the main differences between; Original RF-B50L and RF-B50L for F.R. Germany.

■ SPECIFICATIONS COMPARISON TABLE

Specification	RF-B50L	RF-B50L (For F.R. Germany)
Antenna	EXT Antenna; FM 75Ω LW, SW1~7 High Impedance	—

■ PARTS COMPARISON TABLE

Ref. No.	Part Name & Description	Part Number		Pcs/ Set	Remarks
		RF-B50L	RF-B50L (for F.R. Germany)		
L8	Oscillator Coil, FM	RLO4N183	RLO4N179	1	
L8	Oscillator Coil, FM (for United Kingdom)	RLO4N169	———		Deleted
CF2	Ceramic Filter (for United Kingdom)	RVFSFP462I	———		Deleted
CF3	Ceramic Filter (for United Kingdom)	RVFSFP462G5	———		Deleted
K1	Front Cabinet Ass'y	RYMFB50LXG8	RYMFB50LXGZ8	1	
K2	Rear Cabinet Ass'y	RYFFB50LXG	RYFFB50LXGZ	1	
K2	Rear Cabinet Ass'y (for United Kingdom)	RYFFB50LXE	———		Deleted
R16	Chip 1/8W, 1kΩ	RRD18XJ122	RRD18XJ102	1	
C31	Chip 50V, 27pF	ECUX1H220KC	ECUX1H270KC	1	

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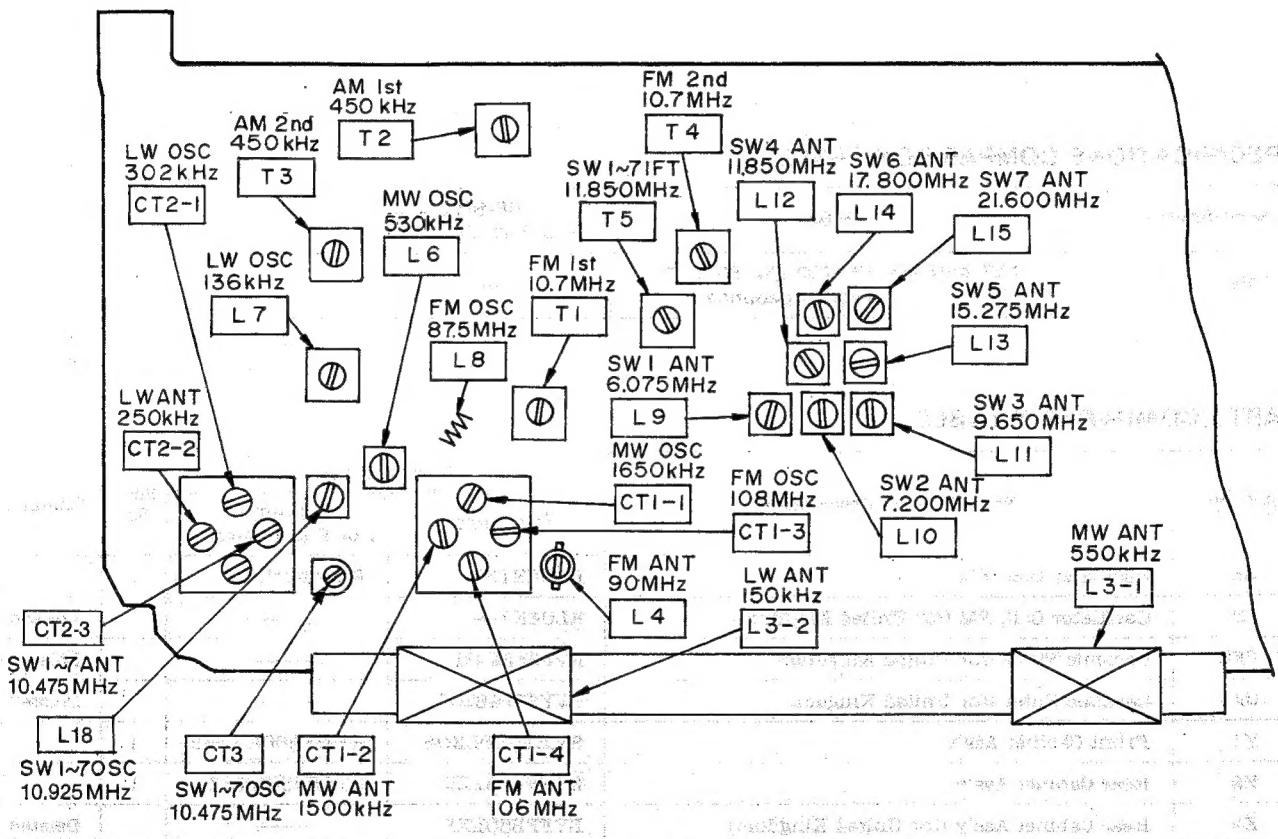
Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

■ FM-RF ALIGNMENT

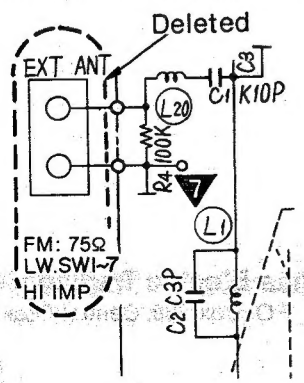
	BAND	SIGNAL GENERATOR or SWEEP GENERATOR CONNECTIONS	SIGNAL GENERATOR or SWEEP GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
			FM-RF ALIGNMENT				
(22)	FM	Connect to test point ▼7 through FM dummy antenna. Negative side to test point ▼7.	87.5MHz	Variable capacitor fully closed.	Output meter across voice coil.	L8 (FM OSC Coil	(*4) Adjust for maximum output.
(23)	FM		108MHz	Variable capacitor fully open.	〃	CT1-3 (FM OSC Trimmer)	〃
(24)	FM		90MHz	Tune to signal.	〃	L4 (FM ANT Coil)	〃
(25)	FM		106MHz	〃	〃	CT1-4 (FM ANT Trimmer)	(*4) Adjust for maximum output. Repeat steps (22)~(25).
	(*4) Three output responses will be present; proper tuning is the center frequency.						

■ ALIGNMENT POINTS

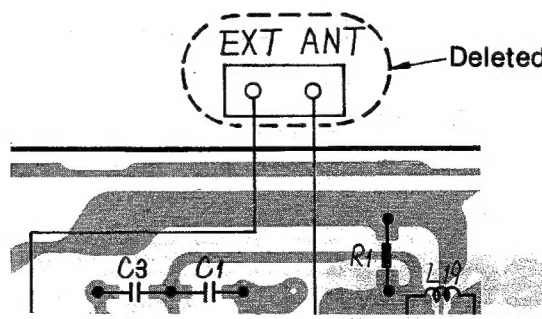
• Please refer to Circuit Board and Wiring Connection Diagram which is located test point.



■ SCHEMATIC DIAGRAM



■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM



RD Ⓐ XGZ
Printed in Japan

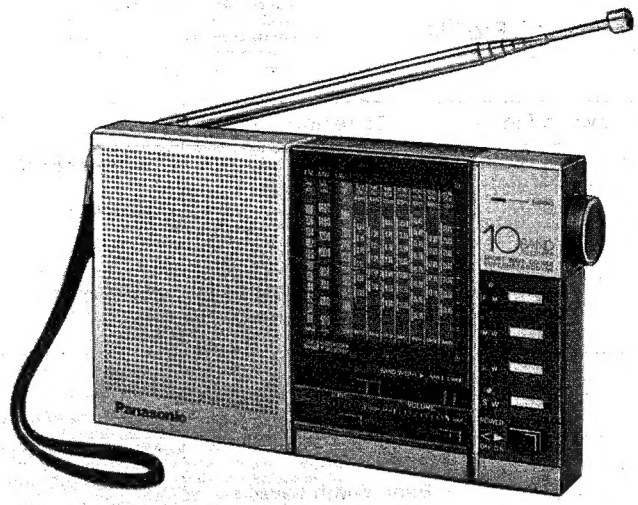
ORDER NO. RD83095388C2

Service Manual

Radio

RF-B50L

FM-MW-LW-SW1~7 10-Band Portable Radio



■ SPECIFICATIONS

Frequency Range:	FM; 87.5~108MHz MW; 520~1610kHz (577~186m) LW; 150~285kHz (2000~1060m) SW1; 5.95~6.2MHz (50.4~48.4m) SW2; 7.1~7.3MHz (42.3~41.1m) SW3; 9.5~9.8MHz (31.6~30.6m) SW4; 11.7~12.0MHz (25.6~25m) SW5; 15.1~15.45MHz (19.9~19.4m) SW6; 17.7~17.9MHz (16.9~16.8m) SW7; 21.45~21.75MHz (14~13.8m)
Intermediate Frequency:	FM; 10.7MHz AM (MW, LW); 450kHz AM (MW, LW); 462kHz (for U.K.) SW1~7; 1st IF 11.850MHz SW1~7; 2nd IF 450kHz SW1~7; 2nd IF 462kHz (for U.K.)
Sensitivity:	FM; 5μV (–3dB, Limit Sens) MW; 101.5μV/m/50mW output LW; 179.7μV/m/50mW output SW1; 2.2μV/50mW output SW2; 2.5μV/50mW output SW3; 1.8μV/50mW output SW4; 1.0μV/50mW output SW5; 1.0μV/50mW output SW6; 1.5μV/50mW output SW7; 6.3μV/50mW output
Power Source:	DC 6V (Four "AA" Size Penlight Battery) (National UM-3 or equivalent)
Power Output:	550mW...RMS (max)
Speaker:	8cm (3") PM Dynamic Speaker
Impedance:	Speaker .....8Ω Earphone/External Speaker Jack φ3.5 .....8Ω
Antenna:	EXT Antenna; FM 75Ω LW, SW1~7 High Impedance Whip Antenna; FM, SW1~7 Ferrite Core Antenna; MW, LW
Dimensions:	184(W)×112(H)×33(D)mm ($7^{1}/_{4}$×$4^{7}/_{16}$×$1^{5}/_{16}$)"
Weight:	500g (1 lb 1.6 oz) without batteries

Specifications are subject to change without notice.

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LOCATION OF CONTROLS AND COMPONENTS

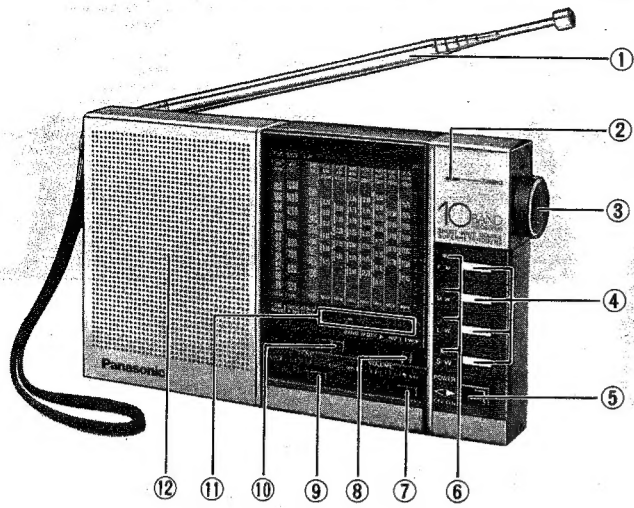


Fig. 1

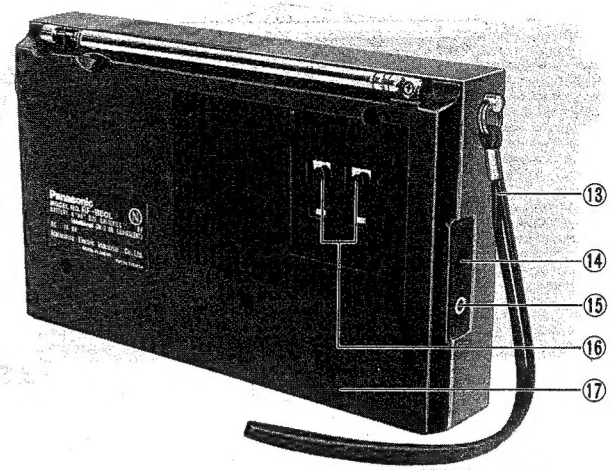


Fig. 2

① Telescopic Antenna
② Tuning Indicator (TUNING)
③ Tuning Control (TUNING)
④ Band Switches (FM, MW, LW, SW1~7)
⑤ Power Switch (POWER)
⑥ Band Indicator
⑦ Volume Control (VOLUME)
⑧ Band Width Switch (BAND WIDTH) (NAR, WIDE)
⑨ Tone Control (TONE)
⑩ SW1~7 Band Switch (SELECTOR) (SW1, SW2, SW3, SW4, SW5, SW6, SW7)
⑪ SW1~7 Band Indicators (INDICATOR)
⑫ Speaker [8cm (3") 8Ω]
⑬ Hand Strap
⑭ External DC Power Jack (DC IN 6V ⊖-◉-⊕)
⑮ Earphone/External Speaker Jack [8Ω only] φ3.5
⑯ External Antenna/Ground Terminals
⑰ Battery Compartment

BLOCK DIAGRAM

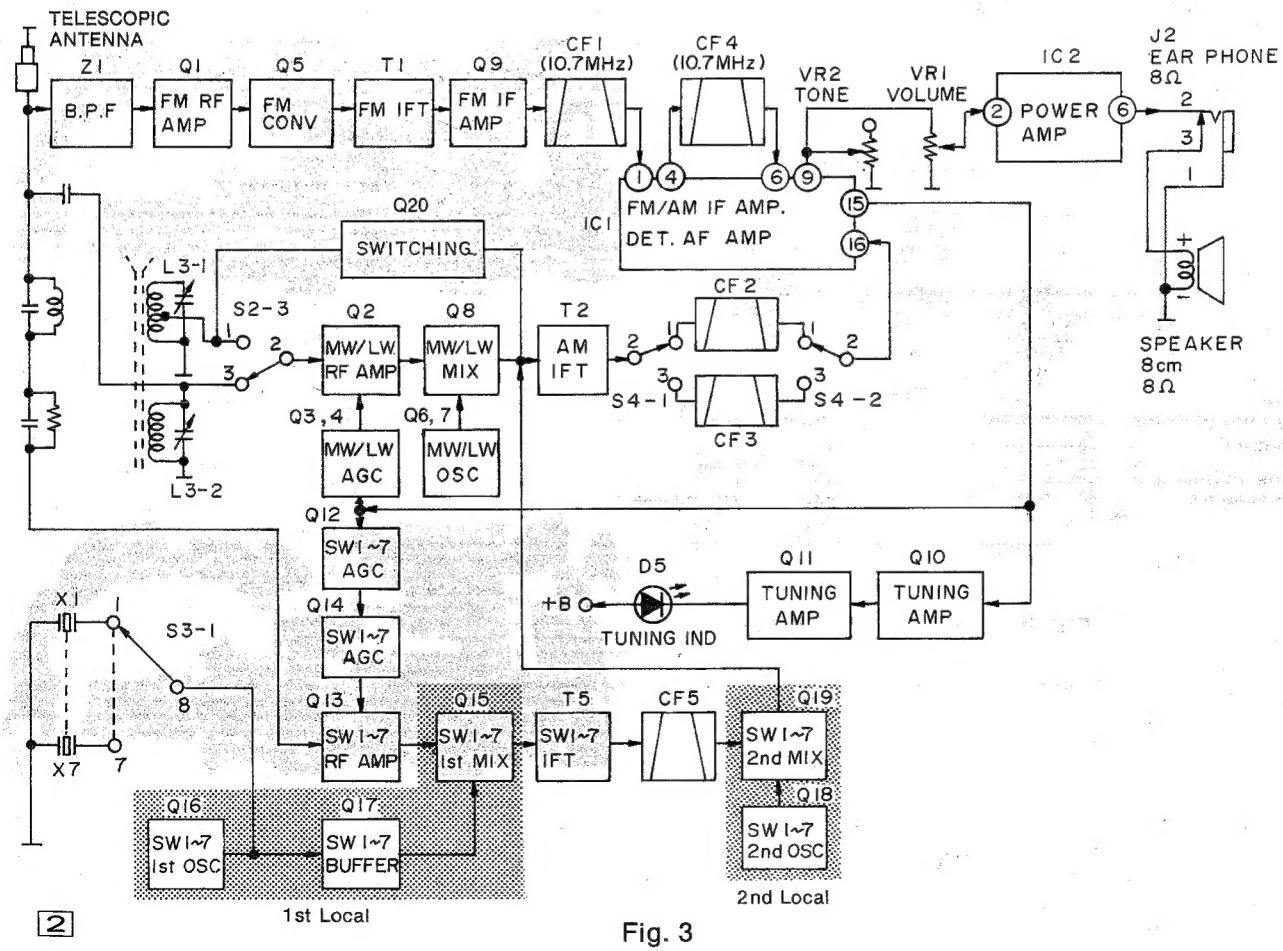


Fig. 3

DISASSEMBLY INSTRUCTIONS

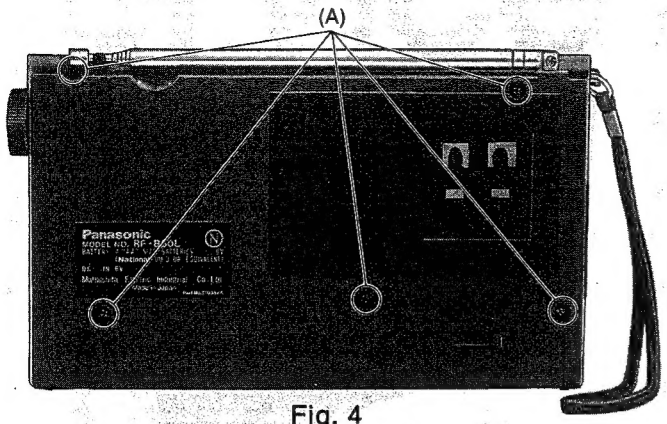


Fig. 4

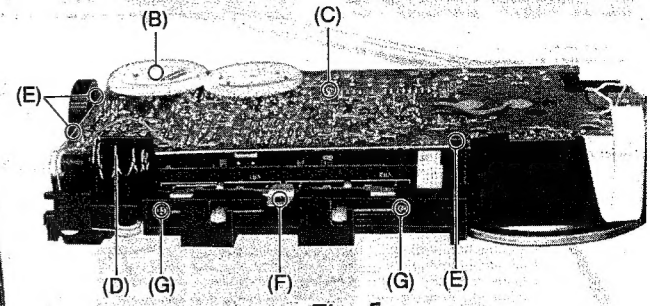


Fig. 5

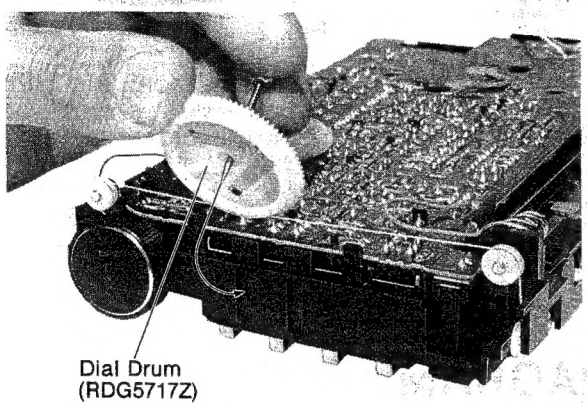


Fig. 6

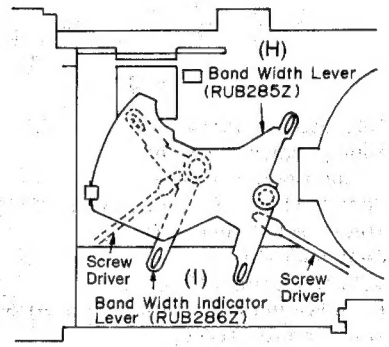


Fig. 7

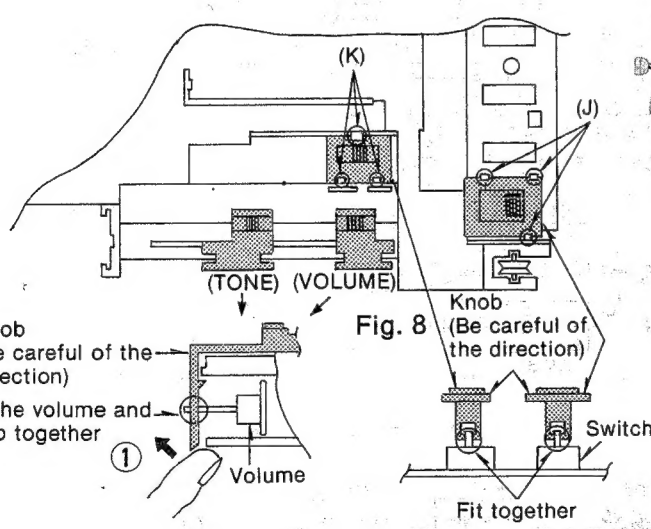


Fig. 8

Fig. 9

Fig. 10

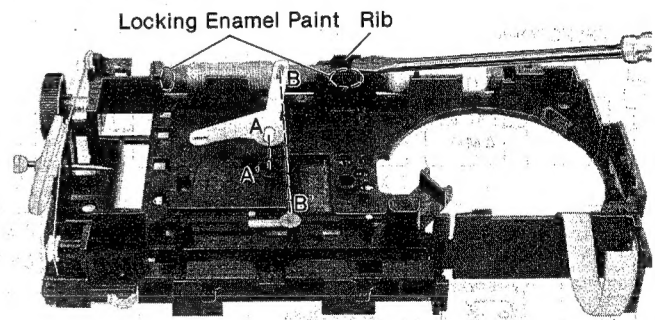


Fig. 11

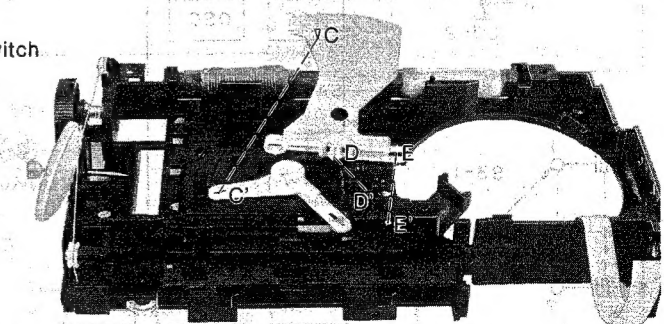


Fig. 12

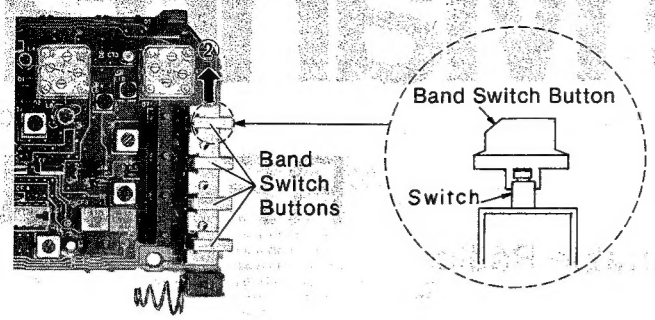


Fig. 13

Fig. 14

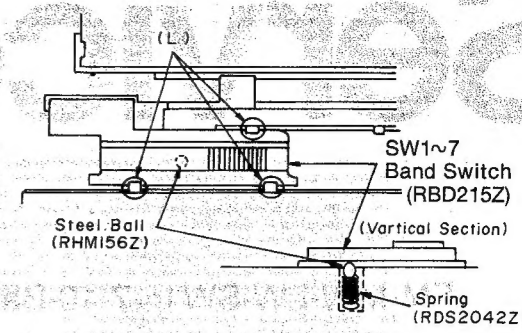


Fig. 15

Ref. No.	Procedure	Shown in Fig. —.	To remove —.	Remove —.
1	1	4	Rear Cabinet	Screw (2.6×12) .....(A)×5
2	1~7	5	Main Circuit Board and Volume Circuit Board *2	Screw (1.7×3) *1 .....(B)×1
3		5		Screw (2×4) .....(C)×1
4		5		Battery terminal (–) .....(D)×1
5		5		Rib .....(E)×3
6		5		Screw (2×4) .....(F)×1
7		5		Screw (2×4) .....(G)×2
8	1~8	7	Band Width Lever *3	To remove the band width lever (RUB285Z), use a screwdriver or similar tool as shown in the figure.....(H)×1
9	1~9	7	Band Wide Indicator Lever *4	To remove the band width indicator lever (RUB286Z), use a screwdriver or similar tool as shown in the figure. .....(I)×1
10	1~7, 10	11	Bar Antenna	To remove the antenna, undo the chassis tab as shown in the figure, and then remove the locking enamel paint from two places to pull out the antenna.
11	1, 11	8, 10	Power Knob	Rib .....(J)×3
12	1, 12	8, 10	Band Width Knob	Rib .....(K)×3
13	1, 13	8, 9	Volume and Tone Knob	Remove the volume and tone knob in the direction of arrow ①.
14	1, 14	15	SW1~7 Band Switch Knob *5	Rib .....(L)×3
15	1~7, 15	13	Band Switch Buttons *6	Remove the band switch buttons in the direction of arrow ②.

*1 Detach dial drum (RDG5717Z) from the Variable Capacitor and fit it securely into the chassis holes as indicated by the arrow by using a pin, etc. (Fig. 6).
*2 Remove the printed circuit board while detaching the jack terminal hole from the chassis.
*3 During installation, simultaneously fit in A and A′, B and B′. (Fig. 11).
*4 During installation, simultaneously fit in C and C′, D and D′, and E and E′. (Fig. 12).
*5 Remove SW1~7 Band Switch Knob (RBD215Z) by removing 3 ribs of the chassis as shown in Fig. 15. At this time, be careful not to loose the steel ball (RHM156Z) and the spring (RDS2042Z).
*6 Align the tab on the knob with the grove of each band switch, and then insert until it contacts the stopper. (Fig. 14).

DIAL THREADING

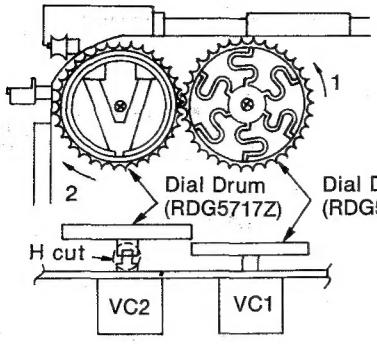


Fig. 16

Fig. 17

1. • Connect the dial drum (RDG5718Z) to VC1, and then turn it all the way in the direction (counterclockwise) indicated by arrow 1 as shown in Fig. 16.
   • Turn VC2 all the way in the direction (clockwise) indicated by arrow 2, and then mount the dial drum (RDG5717Z) in a position like that shown in Fig. 16.
   • Mesh the VC2 dial drum (RDG5717Z) with the VC1 dial drum (RDG5718Z) by fitting the H cut parts together first. (Fig. 17).
2. Wind the dial cord as shown in Fig. 18.
   • Attach the dial cord to the roller shaft at rollers C, D and F, and then attach the dial cord to the rollers again to prevent the teeth of the dial drum from being damaged.
3. • Turn the tuning shaft counterclockwise.
   • Attach the pointer to the dial cord (Figs. 20 and 21), and then slide it downward to the 0 point as shown in Fig. 19.
   • Secure in place with locking enamel paint.

• DIAL CORD LENGTH: 60cm ($23^5/_8$")

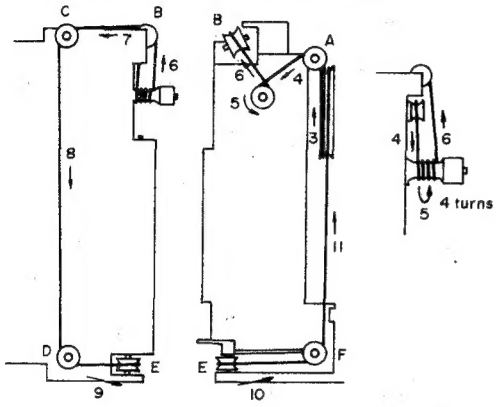
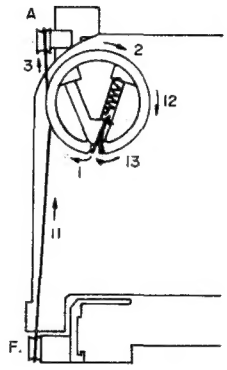


Fig. 18



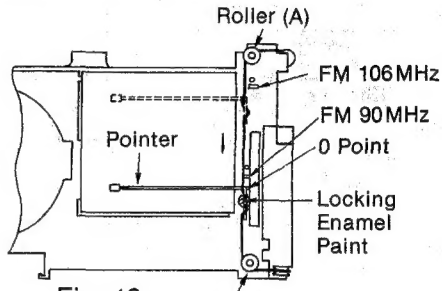


Fig. 19

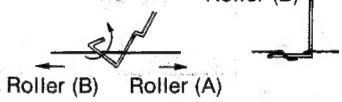


Fig. 20

Fig. 21

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

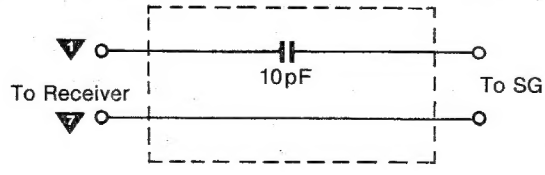
READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT	
1. Set volume control to maximum. 2. Set tone control to high. 3. Set band switch to LW, MW, SW1~7 or FM. 4. Set power switch to ON. 5. Set band width switch to wide.	6. Set power source voltage to 6V DC. 7. Output of signal generator should be no higher than necessary to obtain an output reading.

■ LW, MW, SW1~7 ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
		AM-IF ALIGNMENT					
(1)	MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	450kHz 462kHz (for U.K.) 30% Mod. at 400Hz	Point of non-interference. (on/about 600kHz)	Output meter across voice coil.	T2 (AM 1st IFT) T3 (AM 2nd IFT)	Set band width switch to "NAR". Adjust for maximum output.
		LW-RF ALIGNMENT					
(2)	LW	"	136kHz	Tuning capacitor fully closed.	"	L7 (LW OSC Coil)	Adjust for maximum output.
(3)	LW	"	302kHz	Tuning capacitor fully open.	"	CT2-1 (LW OSC Trimmer)	"
(4)	LW	"	150kHz	Tune to signal.	"	(*1) L3-2 (LW ANT Coil)	Adjust for maximum output. Adjust L3-2 by moving coil bobbin along ferrite core.
(5)	LW	"	250kHz	"	"	CT2-2 (LW ANT Trimmer)	Adjust for maximum output. Repeat steps (2)~(5).

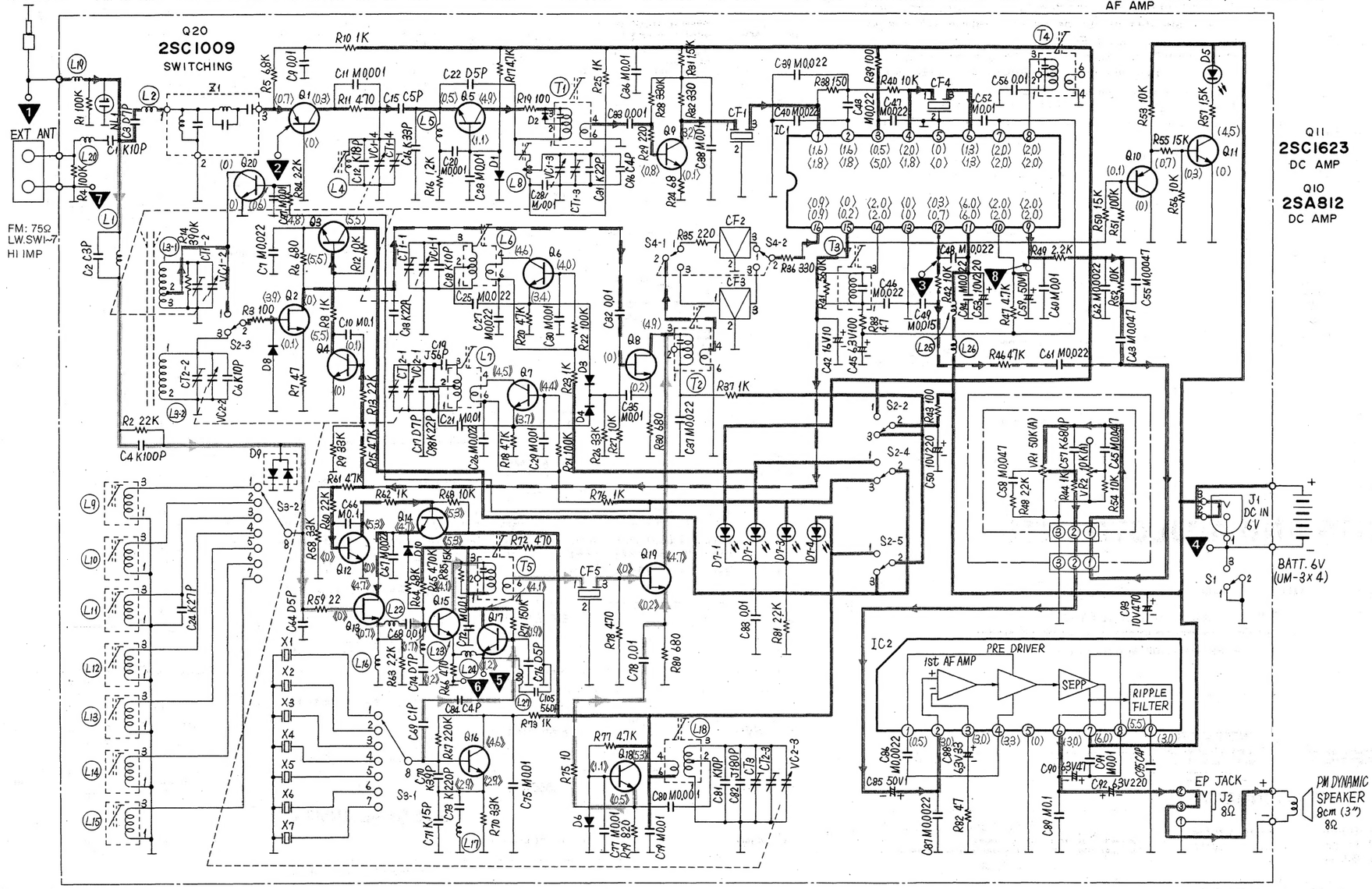
	BAND	SIGNAL GENERATOR or SWEEP GENERATOR CONNECTIONS	SIGNAL GENERATOR or SWEEP GENERATOR FREQUENCY	RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
				MW-RF ALIGNMENT			
(6)	MW	Fashion loop of several turns of wire and radiate signal into loop of receiver.	511kHz	Tuning capacitor fully closed.	Output meter across voice coil.	L6 (MW OSC Coil)	Adjust for maximum output.
(7)	MW	〃	1,650kHz	Tuning capacitor fully open.	〃	CT1-1 (MW OSC Trimmer)	〃
(8)	MW	〃	550kHz	Tune to signal.	〃	(＊1) L3-1 (MW ANT Coil)	Adjust for maximum output. Adjust L3-1 by moving coil bobbin along ferrite core.
(9)	MW	〃	1,500kHz	〃	〃	CT1-2 (MW ANT Trimmer)	Adjust for maximum output. Repeat steps (6)～(9).
	(＊1) Cement antenna bobbin with wax after completing alignment.						
				SW1～7 2nd LOCAL OSC ALIGNMENT			
0)	SW3	Connect to test point ▼7 through ceramic capacitor (10pF). Negative side to test point ▼7.	10.925MHz	Tuning capacitor fully closed.	〃	L18 (SW1～7 OSC Coil)	Adjust for maximum output.
1)	SW3	〃	10.475MHz	Tuning capacitor fully open.	〃	(＊2) CT3 (SW1～7 OSC Trimmer)	Adjust for maximum output. Repeat steps (10) and (11).
	(＊2) If the frequency can not adjust "10.475MHz±5kHz" please re-adjust it by CT2-3 (SW1～7 ANT).						
				SW1～7 1st IF ALIGNMENT			
2)	SW4	〃	11.850MHz 30% Mod. at 400Hz	Point of non-interference.	Output meter across voice coil.	(＊3) T5 (IFT)	Adjust for maximum output.
	(＊3) After alignment, please confirm the oscillate frequency of T5 IFT. The reading should be figure below. SW1: 16.775MHz±1.5kHz SW5: 25.975MHz±1.5kHz SW2: 17.900MHz±1.5kHz SW6: 28.500MHz±1.5kHz SW3: 20.350MHz±1.5kHz SW7: 32.300MHz±1.5kHz SW4: 22.550MHz±1.5kHz FREQUENCY COUNTER ▼5 (+) ▼6 (−) 1 0 0 Input sens: Less than 100mV						
				SW1-RF ALIGNMENT			
3)	SW1	〃	6.075MHz	Tune to signal.	〃	L9 (SW1 ANT Coil)	Adjust for maximum output.
				SW2-RF ALIGNMENT			
4)	SW2	〃	7.200MHz	〃	〃	L10 (SW2 ANT Coil)	Adjust for maximum output.
				SW3-RF ALIGNMENT			
5)	SW3	〃	9.650MHz	〃	〃	L11 (SW3 ANT Coil)	Adjust for maximum output.
				SW4-RF ALIGNMENT			
6)	SW4	〃	11.850MHz	〃	〃	L12 (SW4 ANT Coil)	Adjust for maximum output.
				SW5-RF ALIGNMENT			
7)	SW5	〃	15.275MHz	〃	〃	L13 (SW5 ANT Coil)	Adjust for maximum output.
				SW6-RF ALIGNMENT			
8)	SW6	〃	17.800MHz	〃	〃	L14 (SW6 ANT Coil)	Adjust for maximum output.
				SW7-RF ALIGNMENT			
9)	SW7	〃	21.600MHz	〃	〃	L15 (SW7 ANT Coil)	Adjust for maximum output.

SW Dummy Antenna (For Steps (10)～(19))

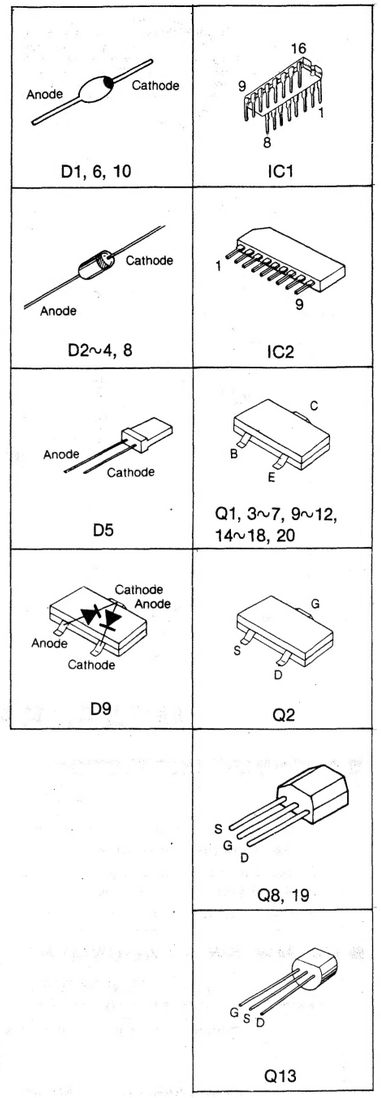


SCHEMATIC DIAGRAM MODEL RF-B50L

Q1	Q2	D8	Q3,4	D1	Q5	D2	Q6	Q7	D3,4	Q8	Q9	IC1	D5
2SA1022	2SK160	MA150	2SC1623	RVDKB265E	2SC2295	MA150	2SC1009	2SC1009	RVDISS53	2SK184	2SC1009	RVIBA4220A	LN224RPH
FM RF AMP	MW/LW RF AMP	PROTECTOR	MW/LW AGC	STABI	FM CONV	FM D. AGC	MW OSC	LW OSC	SWITCHING	MW/LW MIX	FM IF AMP	FM/AM IF AMP, DET, AF AMP	TUNING IND



Q12,14	Q13	D9	Q15	D10	Q16	Q17	D6	Q18	Q19	D7-1~7-4	IC2
2SC1623	2SK104	MA153	2SC2295	RVDKB265G	2SC2295	2SC1009	RVDKB265E	2SC2295	2SK184	LN042157PH	RVILA4140
SW1~7 AGC	SW1~7 RF AMP	PROTECTOR	SW1~7 1st MIX	SW1~7 D. AGC	SW1~7 1st OSC	SW1~7 BUFFER	SW1~7 AOC	SW1~7 2nd OSC	SW1~7 2nd MIX	BAND IND	POWER AMP

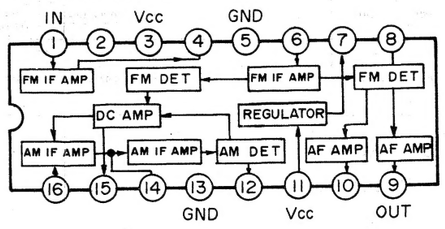


Notes:

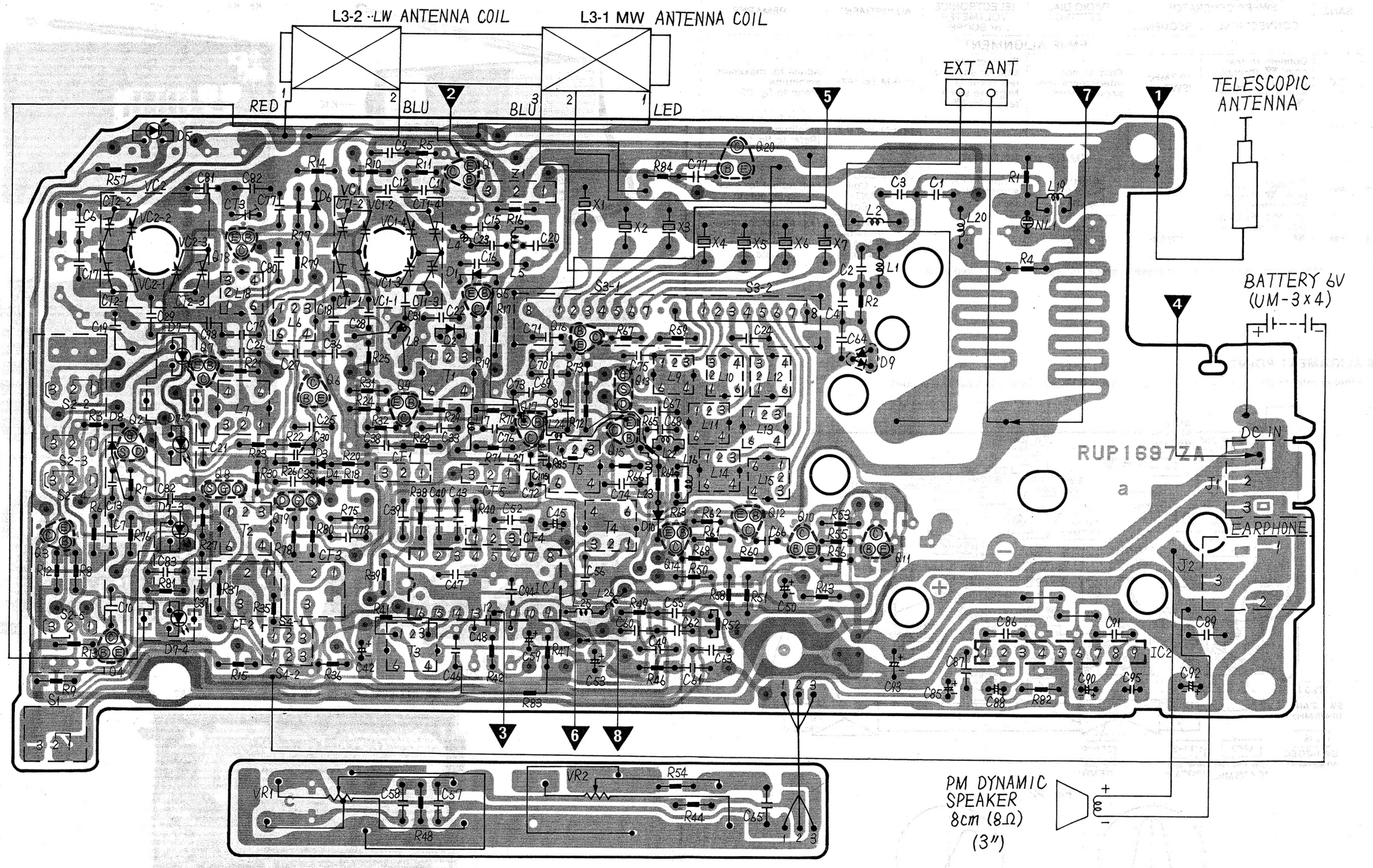
1. S1: Power switch in "OFF" position. (1...OFF, 3...ON)
2. S2-2~S2-5: Band switch.
   - S2-2: FM switch in "ON" position. (1...ON, 3...OFF)
   - S2-3, S2-4: MW switch in "OFF" position. (1...ON, 3...OFF)
   - S2-5: SW1~7 switch in "OFF" position. (1...ON, 3...OFF)
3. S3-1, S3-2: SW1~7 Band switch in "SW1" position. (1...SW1, 2...SW2, 3...SW3, 4...SW4, 5...SW5, 6...SW6, 7...SW7)
4. S4-1, S4-2: Band width switch in "WIDE" position. (1...WIDE, 3...NAR)
5. VR1: Volume control VR.
6. VR2: Tone control VR.
7. DC voltage measurements are taken with electronics voltmeter based on negative terminal of battery.
   < >...FM position, ( )...MW position, (( ))...LW position, << >>...SW1 position.
8. Battery Current No signal 25mA
   Maximum output ...180mA

+(B) Voltage Line
AGC Signal Line
Radio (FM) Signal Line
SW1~7 Signal Line
1st, 2nd OSC Signal Line
MW Signal Line

IC1 RVIBA4220A



CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM MODEL RF-B50L



Varicap.	General	Zener	LED	Photo Diode
Anode / Cathode	Anode / Cathode	Anode / Cathode	Anode / Cathode	Cathode / Anode

Notes:

1. The circuit shown in ▬ on the conductor indicates printed circuit on the back side of the printed circuit board.
2. The circuit shown in ▬ on the conductor indicates printed circuit on the front side of the printed circuit board.
3. The symbols (●) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.

■ FM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
		FM-IF ALIGNMENT					
(20)	FM	Connect to test point ▼2 through 0.001μF. Negative side to test point ▼7 .	10.7MHz (SWP.)	Point of non-interference. (on/about 90MHz)	Connect vert. amp. of scope to test point ▼5 . Negative side to test point ▼4 .	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to fig. 23.)
(21)	FM	〃	〃	〃	〃	T4 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to fig. 24.)
		FM-RF ALIGNMENT					
(22)	FM	Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼7 .	90MHz	90MHz [Refer to Fig. 19]	Output meter across voice coil.	L8 (FM OSC Coil) L4 (FM ANT Coil)	(*4) Adjust for maximum output.
(23)	FM		106MHz	106MHz [Refer to Fig. 19]	〃	CT1-3 (FM OSC Trimmer) CT1-4 (FM ANT Trimmer)	(*4) Adjust for maximum output. Repeat steps (22) and (23).
	(*4) Three output responses will be present; proper tuning is the center frequency.						

■ ALIGNMENT POINTS

• Please refer to Circuit Board and Wiring Connection Diagram which is located test point.

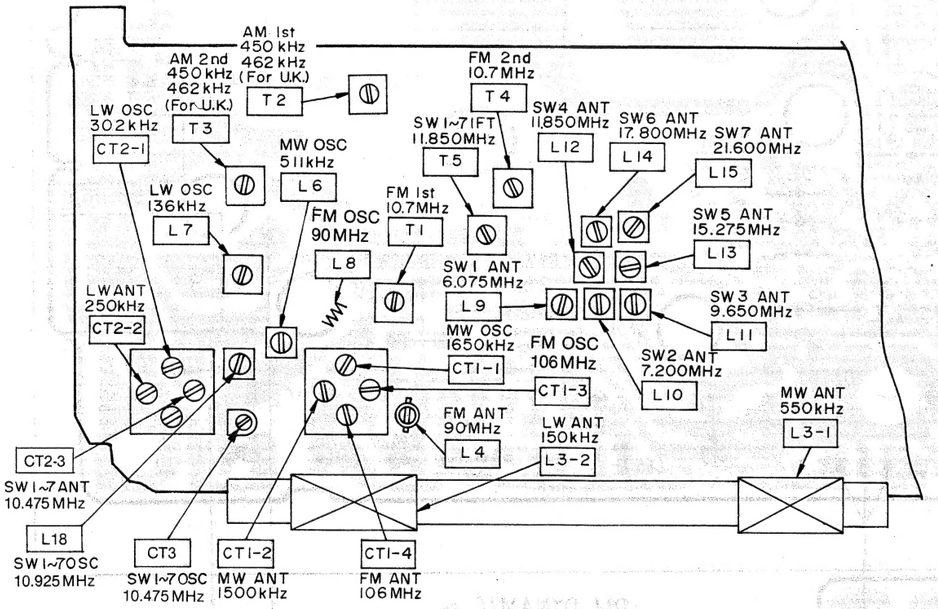


Fig. 22

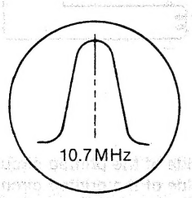


Fig. 23

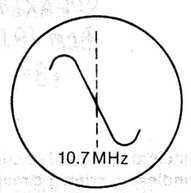


Fig. 24

CABINET AND ELECTRICAL PARTS LOCATION

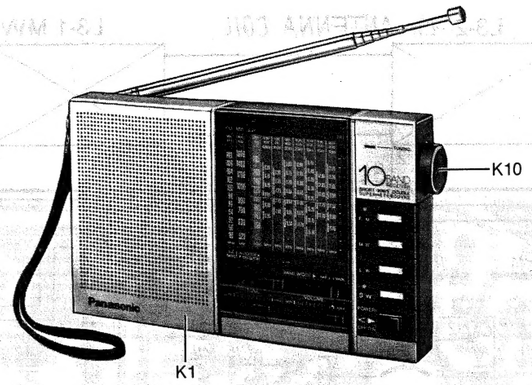


Fig. 25

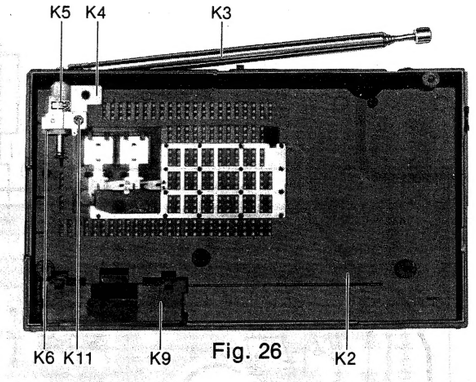


Fig. 26

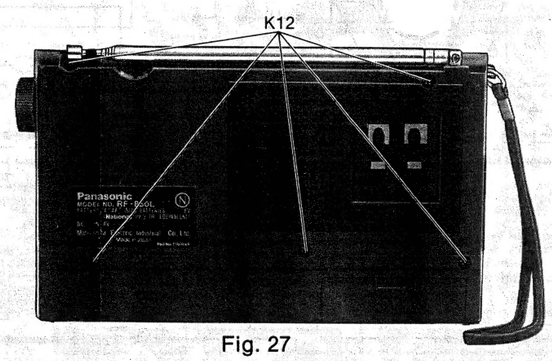


Fig. 27

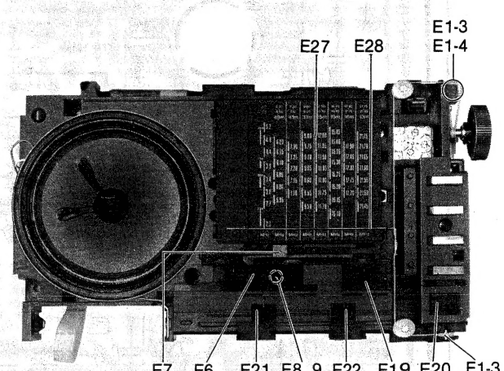


Fig. 28

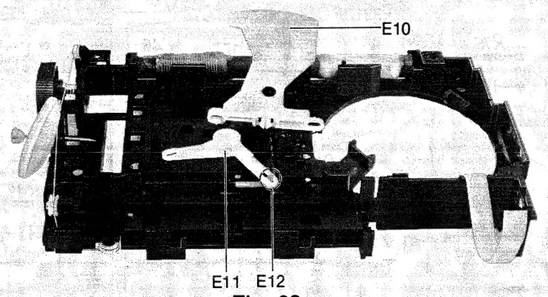


Fig. 29

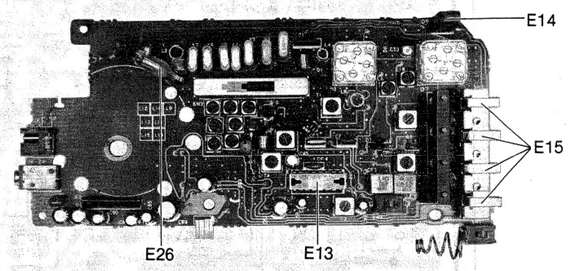


Fig. 30

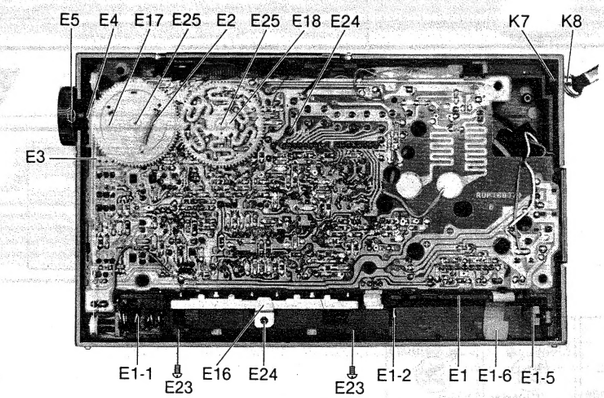


Fig. 31

■REPLACEMENT PARTS LIST..... RF-B50L

(RD83095388C2)

Notes:

1. Important safety notice.
   Components identified by ⚠ mark have special characteristics important for safety.
   When replacing any of these components, use only manufacturer's specified parts.
2. The S mark indicates service standard parts and may differ from production parts.
3. RESISTORS & CAPACITORS
   Unless otherwise specified.
   All resistors are in OHMS (Ω) K=1000Ω, M=1000kΩ
   All capacitors are in MICRO FARADS (μF) P=μμF

*Type & Wattage of Resister

Type

ERC:Solid	ERX:Metal Film	ERW:Wirewound Resister
ERD:Carbon	ERG:Metal Oxide	ERS:Fusible Resister
RRD:Chip	ERO:Metal Film	ERF:Cement Resister

Wattage

10,16:1/8W	14,25:1/4W	12:1/2W	1:1W	2:2W	3:3W

*Type & Voltage of Capacitor

Type

ECFW:Semi-conductor	ECCD,ECKD,ECBT:Ceramic	
ECQS:Styrol	ECQM,ECQV,ECQG:Polyester	
ECUX:Chip	ECEA,ECSZ	:Electrolytic
ECMS:Mica	ECQP	:Polypropylene

Voltage

ECQ Type	ECQG, ECQV, Type	ECSZ Type	Others			
1H: 50V	0,5: 50V	0F:3.15V	0J	:6.3V	1H,1V,50:	50V
2A:100V	1:100V	1A:10V	1A	:10V	1J	: 63V
2E:500V	2:200V	1V:35V	1C	:16V	2A	:100V
2H:500V		0J:6.3V	1E,25:25V			

Ref. No.	Part No.	Part Name & Description	Per Set	
		INTEGRATED CIRCUITS, TRANSISTORS AND DIODES		
IC1	RVIBA4220A	IC	1	
IC2	RVILA4140	IC	1	
Q1	2SA1022C	Transistor (Si)	1	
Q2	2SK160K5	Transistor (Si)	1	
Q3,4, 12,14	2SC1623L5A	Transistor (Si)	4	
Q5,15, 16,18	2SC2295B	Transistor (Si)	4	
Q6,7,9, 17,20	2SC1009F4	Transistor (Si)	5	
Q8,19	2SK184Y	Transistor (Si)	2	
Q10	2SA812M5	Transistor (Si)	1	
Q11	2SC1623L6A	Transistor (Si)	1	
Q13	2SK104F	Transistor (Si)	1	
D1,6	RVDKB265E	Diode (Si)	2	S
D2,8	MA161	Diode (Si)	2	S
D3,4	RVD1SS53	Diode (Si)	2	
D5	LN224RPH	LED	1	
D7	LN042157PH	LED	1	
D9	MA153	Diode (Si)	1	
D10	RVDKB265G	Diode (Si)	1	S
		CRYSTALS		
X1	RVCA16775NRN	Crystal	1	
X2	RVCA17900NRN	Crystal	1	
X3	RVCA20350NRN	Crystal	1	
X4	RVCA22550NRN	Crystal	1	
X5	RVCA25975NRN	Crystal	1	
X6	RVCA28500NRN	Crystal	1	
X7	RVCA32300NRN	Crystal	1	
		COILS AND TRANSFORMERS		
L3-1,3-2	RLF6D18	Antenna Coil, MW, LW	1	
L4	RLO4N120	Antenna Coil, FM	1	
L6	RLO2A10	Oscillator Coil, MW	1	
L7	RLO1A2	Oscillator Coil, LW	1	
L8	RLO4N183	Oscillator Coil, FM	1	
L9	RLA3A8	Antenna Coil, SW1	1	
L10	RLA3A9	Antenna Coil, SW2	1	
L11,12	RLA3A11	Antenna Coil, SW3, SW4	2	
L13	RLA3A12	Antenna Coil, SW5	1	
L14	RLA3A13	Antenna Coil, SW6	1	
L15	RLA3A14	Antenna Coil, SW7	1	
L16	RLQZB101K	Choke Coil	1	
L17	RLQZA8R2K	Choke Coil	1	
L18	RLO3A10	Oscillator Coil, SW1∿7 2nd Local	1	
T1,5	RLI4A8	FM 1st IFT, SW1∿7 1st IFT	2	
T2	RLI2A10	AM 1st IFT	1	
T3	RLI2A20	AM 2nd IFT	1	
T4	RLI4A9	FM 2nd IFT	1	
		VARIABLE RESISTORS		
VR1	EWALG2C10A54	Variable Resistor, 50kΩ (A)	1	
VR2	EWALG0C10A14	Variable Resistor, 10kΩ (A)	1	
		VARIABLE CAPACITORS		
VC1-1∿ 1-4	RCV4LC4V1N	Tuning Capacitor/with Trimmer Capacitor (CT1-1∿1-4) MW, FM	1	
VC2-1∿ 2-4	RCV3YC4VN	Tuning Capacitor/with Trimmer Capacitor (CT2-1∿2-4) LW, SW1∿7	1	
CT3	RCVCTZ3130	Trimmer Capacitor	1	
		CERAMIC FILTERS		
CF1,4	RVF107NAR	Ceramic Filter	2	
CF2	RVFSFP455G5	Ceramic Filter	1	
CF2	RVFSFP462I	Ceramic Filter (for United Kingdom)	1	
CF3	RVFSFP455I	Ceramic Filter	1	
CF3	RVFSFP462G5	Ceramic Filter (for United Kingdom)	1	
CF5	RVFSFE107SW	Ceramic Filter	1	
		COMPONENT COMBINATION		
Z1	RXABPWB5	Component Combination	1	
		SPEAKER		
	EAS8P24S	Speaker, 8cm (3"), 8Ω PM Dynamic	1	
		SWITCHES		
S1	RSS2A37Z	Switch, Power	1	
S2	RSHX050Z	Switch, Band (FM, MW, LW, SW1∿7)	1	
S3	RSS7B02Z	Switch, Band (SW1∿7)	1	
S4	RSS2B36Z	Switch, Band Width	1	
		JACKS		
J1	RJJ1B1Z	Jack, DC IN	1	
J2	RJJ1D3Y	Jack, Earphone	1	
		CABINET PARTS		
K1	RYMFB50LXG8	Front Cabinet Ass'y	1	
K2	RYFFB50LXG	Rear Cabinet Ass'y	1	
K2	RYFFB50LXE	Rear Cabinet Ass'y (for United Kingdom)	1	
K3	XEARR130GBY	Telescopic Antenna	1	
K4	RJT826Z	Terminal, Antenna	1	
K5	RHM89Z	Roller	1	
K6	RMA5083Z	Plastics Antenna Bracket	1	
K7	XUC2FT	Circlip	2	S
K8	RKH96Y	Hand Strap	1	
K9	RYNFB50M	Battery Cover Ass'y	1	
K10	RBN653Z	Knob, Tuning	1	
K11	XTN26+8C	Screw	1	
K12	XTN26+12CFZ	Screw	5	

Ref. No.	Part No.	Part Name & Description	Per Set
		ELECTRICAL PARTS	
E1	RZAFB50M	Dial Chassis Ass'y	1
E1-1	RJC735Z	Terminal Battery -	1
E1-2	RJC368Z	Terminal Battery +	1
E1-3	RDR49Z	Roller	2
E1-4	RDY45Z	Shaft, Roller	2
E1-5	RJC935Z	Terminal, Battery +, -	1
E1-6	RHS31Z	Battery String	1
E2	RDS2061Z	Spring, Dial	1
E3	RDZ03Y	Cord, Dial (60cm)	1 ROLL
E4	RDX187Y	Shaft, Tuning	1
E5	XUC12FT	Circlip	1 S
E6	RBD215Z	Knob, SW1∿7 Band Switch	1
E7	RGK1139Z	Band Width Indicator	1
E8	RDS2042Z	Spring, SW1∿7 Band Switch Knob	1
E9	RHM156Z	Steel Ball, SW1∿7 Band Switch Knob	1
E10	RUB285Z	Band Width Lever	1
E11	RUB286Z	Band Width Indicator Lever	1
E12	RHS706Y	Spacer	1
E13	RMC171Y	Shield Plate (IC1)	1
E14	RMP209Z	LED Holder	1
E15	RBC484Z	Knob, Band Switch	4
E16	RMR112Z	Bracket, Tone and Volume Control	1
E17	RDG5717Z	Drum, Dial (VC2)	1
E18	RDG5718Z	Drum, Dial (VC1)	1
E19	RBD211Z	Knob, Band Width	1
E20	RBD212Z	Knob, Power	1
E21	RBD214Z	Knob, Tone	1
E22	RBD213Z	Knob, Volume	1
E23	XSN2+4	Screw	2 S
E24	XTNR2+4CFZ	Screw	2
E25	XSHR17+3	Screw	2
E26	XANR2T20	Neon Lamp	1
E27	RKD639X	Scale, Dial	1
E28	RDP249Z	Pointer	1
		ACCESSORIES	
	RQD204Z	Carrying Case	1
	XEH1A1-X	Earphone	1
		PACKING MATERIALS	
	XZB26X35A04	Polyethylene Cover	1 S
	RPN4335Z	Pad	1
	RPN4336Z	Pad	1
	RPK1740Z	Gift Box	1
	RPF9Z	Polyethylene Cover	1
	RPE526Z	Pad	1
	QQC0689A	Caution Tag	1
		PRINTED MATERIAL	
	RQX4257Z	Instruction Book	1

Ref. No.	Part No.	Value
	RESISTORS	
R1	RRD18XJ104	100k
R2	RRD18XJ223	22k
R3	RRD18XJ101	100
R4	RRD18XJ104	100k
R5	RRD18XJ682	6.8k
R6	RRD18XJ681	680
R7	RRD18XJ470	47
R8	RRD18XJ102	1k
R9	RRD18XJ333	33k
R10	RRD18XJ102	1k
R11	RRD18XJ471	470
R12	RRD18XJ103	10k
R13	RRD18XJ223	22k
R14	RRD18XJ474	470k
R15	RRD18XJ473	47k
R16	RRD18XJ122	1.2k
R17	RRD18XJ472	4.7k
R18	RRD18XJ473	47k
R19	RRD18XJ101	100
R20	RRD18XJ473	47k
R21	RRD18XJ104	100k
R22	RRD18XJ104	100k
R23	RRD18XJ102	1k
R24	RRD18XJ680	68
R25	RRD18XJ102	1k
R26	RRD18XJ332	3.3k
R27	RRD18XJ103	10k
R28	RRD18XJ334	330k
R29	RRD18XJ221	220
R30	RRD18XJ681	680
R31	RRD18XJ152	1.5k
R32	RRD18XJ331	330
R35	RRD18XJ221	220
R36	RRD18XJ331	330
R37	RRD18XJ102	1k
R38	RRD18XJ151	150

Ref. No.	Part No.	Value
R39	RRD18XJ101	100
R40	RRD18XJ103	10k
R41	ERD10TJ564	560k S
R42	RRD18XJ103	10k
R43	RRD18XJ101	100
R44	RRD18XJ102	1k
R46	RRD18XJ473	47
R47	RRD18XJ472	4.7k
R48	RRD18XJ222	2.2k
R49	RRD18XJ222	2.2k
R50	RRD18XJ153	15k
R51	RRD18XJ104	100k
R52	ERD10TJ103	10k S
R53	RRD18XJ103	10k
R54	RRD18XJ103	10k
R55	RRD18XJ153	15k
R56	RRD18XJ103	10k
R57	RRD18XJ152	1.5k
R58	RRD18XJ333	33k
R59	RRD18XJ220	22
R60	RRD18XJ223	22k
R61	RRD18XJ473	47k
R62	RRD18XJ102	1k
R63	RRD18XJ222	2.2k
R64	RRD18XJ683	68k
R65	ERD10TJ474	470k S
R66	RRD18XJ471	470
R67	RRD18XJ224	220k
R68	RRD18XJ103	10k
R70	RRD18XJ332	3.3k
R71	RRD18XJ154	150k
R72	RRD18XJ471	470
R73	RRD18XJ102	1k
R75	RRD18XK100	10
R76	RRD18XJ102	1k
R77	RRD18XJ472	4.7k
R78	RRD18XJ471	470
R79	RRD18XJ821	820
R80	RRD18XJ681	680
R81	RRD18XJ222	2.2k
R82	RRD18XJ470	47
R83	ERD25FJ470	47 S
R84	RRD18XJ222	2.2k
R85	ERD10TJ153	15K S
	CAPACITORS	
C1	ECUX1H100KC	10P
C2	ECUX1H030CC	3P
C3	ECUX1H070DC	7P
C4	ECUX1H101K	100P
C6	ECUX1H100KC	10P
C7	ECUX1H223MD	0.022
C9	ECUX1H103ZF	0.01
C10	ECUX1E104MD	0.1
C11	ECUX1H102MD	0.001
C12	ECUX1H180KC	18P
C13	ECUX1H220KC	22P
C15	ECUX1H050CC	5P
C16	ECUX1H330KC	33P
C17	ECUX1H070DC	7P
C18	ECUX1H100KC	10P
C19	ECCD1H560JU	56P
C20	ECUX1H102MD	0.001
C21	ECUX1H103MD	0.01
C22	ECUX1H050DC	5P
C23	ECUX1H103MD	0.01
C24	ECUX1H270KC	27P
C25	ECUX1H223MD	0.022
C26	ECUX1H223MD	0.022
C27	ECUX1H223MD	0.022

Ref. No.	Part No.	Value
C28	ECUX1H103MD	0.01
C29	ECUX1H103MD	0.01
C30	ECFT1E103MD	0.01
C31	ECUX1H220KC	22P
C32	ECUX1H103ZF	0.01
C33	ECUX1H102ZF	0.001
C35	ECUX1H103MD	0.01
C36	ECUX1H103MD	0.01
C37	ECUX1H223MD	0.022
C38	ECUX1H103MD	0.01
C39	ECUX1H223MD	0.022
C40	ECUX1H223MD	0.022
C42	ECEA1CK100	10
C43	ECUX1H223MD	0.022
C44	ECUX1H223MD	0.022
C45	ECEA0JK101	100
C46	ECUX1H223MD	0.022
C47	ECUX1H223MD	0.022
C48	ECFT1E223MD	0.022
C49	ECUX1H153MD	0.015
C50	ECEA1AU221	220
C51	ECUX1H223MD	0.022
C52	ECUX1H103MD	0.01
C53	ECEA1AU221	220
C55	ECUX1H472MD	0.0047
C56	ECUX1H103ZF	0.01
C57	ECUX1H681KB	680P
C58	ECUX1E473MD	0.047
C59	ECEA1HK010	1
C60	ECUX1H103MD	0.01
C61	ECUX1H223MD	0.022
C62	ECUX1H222MD	0.0022
C63	ECUX1E473MD	0.047
C64	ECUX1H050DC	5P
C65	ECUX1E473MD	0.047
C66	ECUX1E104MD	0.1
C67	ECUX1H223MD	0.022
C68	ECUX1H103ZF	0.01
C69	ECUX1H010CC	1P
C70	ECUX1H390KC	39P
C71	ECUX1H150KC	15P
C72	ECUX1H103MD	0.01
C73	ECUX1H221KC	220P
C74	ECUX1H070DC	7P
C75	ECUX1H103MD	0.01
C76	ECUX1H050DC	5P
C77	ECUX1H103MD	0.01
C78	ECUX1H103ZF	0.01
C79	ECUX1H103MD	0.01
C80	ECUX1H102MD	0.001
C81	ECUX1H100KC	10P
C82	ECMS05181J	180P
C83	ECUX1H103ZF	0.01
C84	ECUX1H040CC	4P
C85	ECEA50Z1	1 S
C86	ECUX1H222MD	0.0022
C87	ECUX1H222MD	0.0022
C88	ECEA1CS330	33 S
C89	ECQV05104JZ	0.1
C90	ECEA1AS470	47 S
C91	ECUX1H103MD	0.01
C92	ECEA0JU221	220
C93	ECEA1AU471	470
C94	ECUX1H223MD	0.022
C95	ECUX1H040CC	4P
C97	ECUX1H103MD	0.01
C98	ECCD1H220KU	22P
C105	ECKD1H561KB	560P

RD Ⓗ XG/XE
Printed in Japan